

Claims

1. An acrylic pressure-sensitive adhesive composition comprising a solution or
5 miscible blend of:
 - a. at least one hydrophobic (meth)acrylic polymer,
 - b. at least one substantially water insoluble polyol having a number average molecular weight of from 1000 to 20000 and selected from the group consisting of polyester polyols, acrylic polyols, polycarbonate polyols and polyether polyols.
 - 10 c. at least one transition metal complex as cross-linking agent,
 - d. optionally one or more tackifying resins,
 - e. optionally one or more solvents,
 - f. optionally one or more of plasticizers, adhesion promoters, pigments, fillers, antioxidants and UV stabilizers
- 15 2. The acrylic pressure sensitive adhesive composition according to claim 1 wherein:
 - a. is present in an amount of about 30 to 95% by weight,
 - b. is present in an amount of about 5 to 50% by weight,
 - 20 c. is present in an amount of about 0.05 to 2.0% by weight,
 - d. is present in an amount of up to about 50% by weight,
 - e. is present in an amount of up to about 90% by weight and
 - f. is present in an amount of about 10% by weight.
- 25 3. The acrylic pressure-sensitive adhesive composition according to claim 1 wherein the (meth)acrylic polymer comprises the reaction product of:
 - i) about 50 to 99 % by weight of at least one alkyl (meth)acrylate monomer having an alkyl group which contains about 1 to 22 carbon atoms;
 - ii) 0 to about 50 % by weight of at least one other monomer selected from the group consisting of alkyl (meth)acrylate monomers having an alkyl group containing about 1 to 22 carbon atoms, vinyl acetate and styrene; and
 - 30 iii) about 0.5 to about 20 % by weight of at least one polar monomer selected from the group consisting of monofunctional carboxylic acid monomers, multifunctional carboxylic acid monomers, monofunctional hydroxymonomers, multifunctional hydroxy monomers, cyanoalkyl acrylates, acrylamides, acrylonitriles, butanediol monoacrylate and vinyl pyrrolidone.

- 12 -

4. The acrylic pressure-sensitive adhesive composition according to claim 1
wherein the cross-linking agent (c) is selected from the group consisting transition metal
acetyl acetonates.

5 5. The acrylic pressure-sensitive adhesive composition according to claim 1
wherein the tackifying resin d. is selected from the group consisting of:

- i) rosin acid, polymerized rosin acid, rosin ester and mixtures thereof;
- ii) hydrogenated rosin acid, hydrogenated rosin ester and mixtures thereof;
- iii) polyterpene and terpene phenolic resins;
- 10 iv) aromatic resins consisting of a reaction product of styrene,
alpha-methyl styrene, vinyl toluene and mixtures thereof;
- v) phenolic modified aromatic resins, benzoate resins, coumarone-indene
resins, synthetic phenol resins, and mixtures thereof.

15 6. The acrylic pressure-sensitive adhesive composition according to claim 1
wherein the solvent of e. is selected from the group consisting of aliphatic esters, aliphatic
hydrocarbons, halogenated aliphatic hydrocarbons, aromatic hydrocarbons, aliphatic
alcohols, aliphatic ketones and mixtures thereof.

20 7. The acrylic pressure-sensitive adhesive composition according to claim 6
wherein the aliphatic hydrocarbons are heptane or hexane, the aromatic hydrocarbons
are toluene or xylene, the aliphatic alcohols are methanol, ethanol or isopropanol, the
aliphatic ketone is acetone and the aliphatic ester is ethyl acetate.

25 8. The acrylic pressure-sensitive adhesive composition according to claim 1
additionally containing about 0.1 to 2.0 % by weight of an antioxidant or UV stabilizer.

9. An adhesive coated sheet material formed by coating a substrate sheet with
the acrylic pressure-sensitive adhesive composition of claim 1.